

# Texas Water Development Board



# WATER Conditions

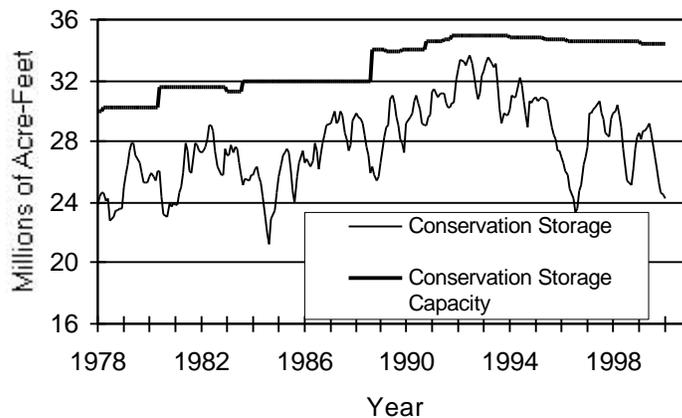
## RESERVOIR STORAGE

*January 2000*

Near the end of January, the 77 reservoirs monitored for this report held 24.2 million acre-feet in conservation storage. This is 70.1 percent of the conservation storage capacity of the State's major reservoirs, the lowest percentage of total capacity for a January in 23 years of record, and the fifth-lowest for all months in the record. This is the third consecutive month of record low reservoir levels. Compared to the end of December, storage decreased 0.32 million acre-feet (-0.9% of conservation storage capacity). Compared to this month last year, storage decreased 4.35 million acre-feet (-12.6%).

Of the monitored reservoirs, only 3 held 100 percent of conservation storage near the end of January. Storage decreased during January by up to 2% in all climatic regions except the Trans-Pecos, which increased by 0.4%. The largest changes since the end of January 1999 occurred in the High Plains (+11%), North Central (-10%), East (-19%), South Central (-22%), and Upper Coast (-25%).

### CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS



Current data are based on elevation near end of month at 77 reservoirs that represent 98 percent of total conservation storage capacity in Texas reservoirs having a capacity of 5,000 acre-feet or more.

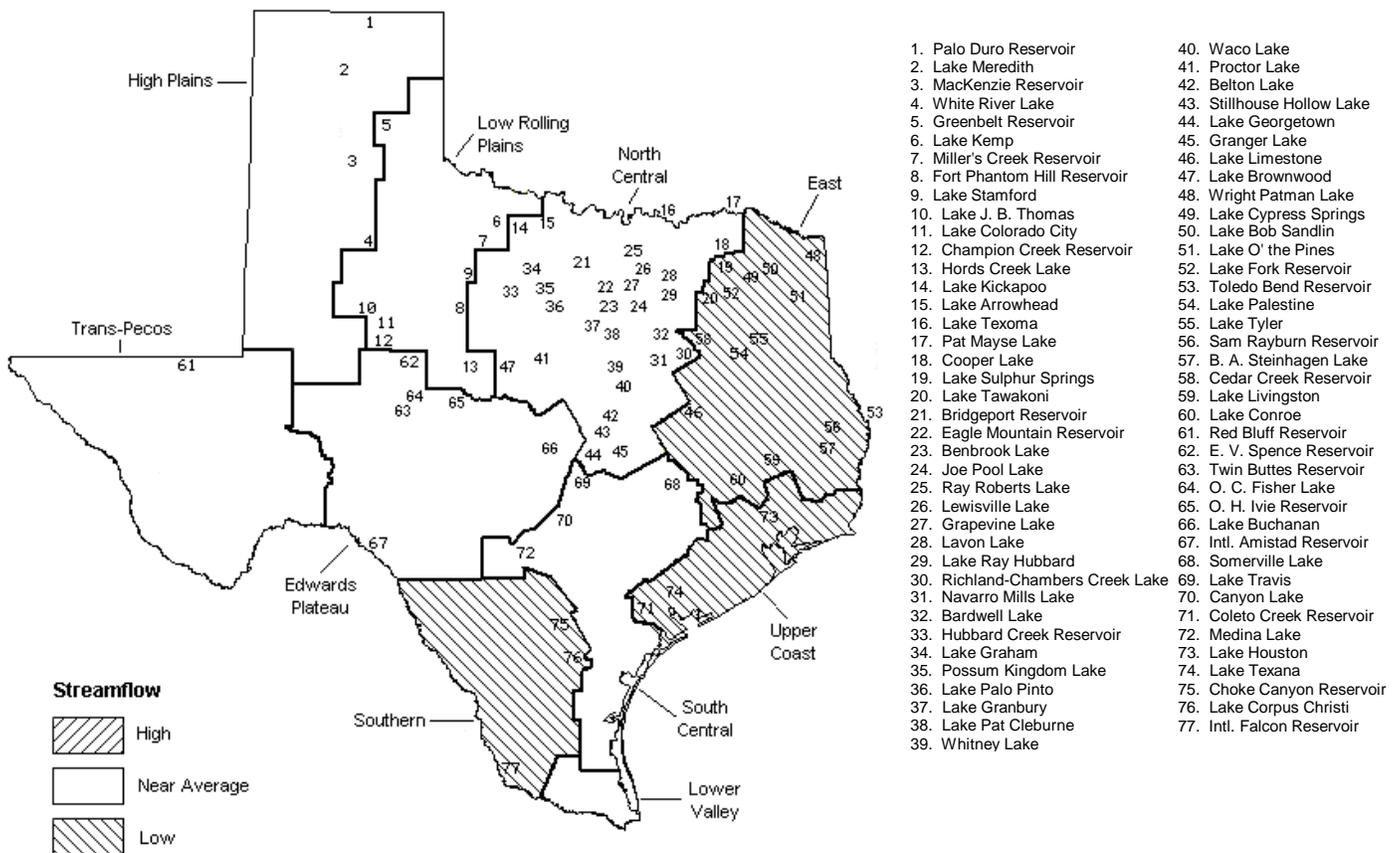
# STREAMFLOW

Of 23 reporting index stations in January, computed 30-day mean flows were high (5% - 30% exceedance) at 2 stations, near normal (30% - 70% exceedance) at 12 stations, and low (70% - 95% exceedance) at 9 stations. In comparison to December, flows increased at 9 index stations and decreased at 8 stations.

Flows in January were normal in six of nine climatic regions. Near normal flows occurred in the High Plains, Trans-Pecos, Edwards Plateau, Low Rolling Plains, South Central, and North Central regions. Flows at all four reporting stations in East Texas were below December levels. One station, North Concho river near Carlsbad, Texas, recorded no flow in January.

## JANUARY STREAMFLOW CONDITIONS

Reservoirs Shown on Map



## CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation		Change since		Change since		
		Storage Capacity (acre-feet)	Storage Late January 2000 (acre-feet) (%)	Late December 1999 (acre-feet) (%)	Late January 1999 (acre-feet) (%)			
<b>HIGH PLAINS</b>								
Palo Duro Reservoir	1	60,900	17,467 29	-1,241 -2	8,124 13			
Lake Meredith (Texas)	2	500,000	381,200 76	-5,800 -1	50,100 10			
Lake Meredith (Texas and Oklahoma)	(2)	779,560	381,200 49	-5,800 -1	50,100 6			
MacKenzie Reservoir	3	46,250	9,700 21	-120 0	2,610 6			
White River Lake	4	31,850	16,340 51	-400 -1	7,875 25			
TOTAL		639,000	424,707 66	-7,561 -1	68,709 11			
<b>LOW ROLLING PLAINS</b>								
Greenbelt Reservoir	5	58,200	25,400 44	-40 0	2,650 5			
Lake Kemp	6	319,600	143,800 45	-7,300 -2	-10,800 -3			
Miller's Creek Reservoir	7	27,890	10,700 38	-170 -1	-3,004 -11			
Fort Phantom Hill Reservoir	8	70,030	20,450 29	-10 0	-6,077 -9			
Lake Stamford	9	52,700	11,300 21	-510 -1	-7,330 -14			
Lake J. B. Thomas	10	202,300	29,050 14	-740 0	22,100 11			
Lake Colorado City	11	30,800	14,000 45	-420 -1	-730 -2			
Champion Creek Reservoir	12	41,600	5,040 12	-10 0	-5,370 -13			
Hords Creek Lake	13	8,600	3,215 37	-184 -2	-1,782 -21			
TOTAL		811,720	262,955 32	-9,384 -1	-10,343 -1			
<b>NORTH CENTRAL</b>								
Lake Kickapoo	14	106,000	51,299 48	-1,716 -2	-2,711 -3			
Lake Arrowhead	15	262,100	130,300 50	-2,600 -1	-46,100 -18			
Lake Texoma	16	2,722,300	2,254,973 83	-58,103 -2	-6,488 0			
Pat Mayse Lake	17	124,500	110,736 89	-341 0	-13,764 -11			
Cooper Lake	18	273,000	225,501 83	156 0	-47,499 -17			
Lake Sulphur Springs	19	17,710	14,058 79	45 0	-3,020 -17			
Lake Tawakoni	20	936,200	745,500 80	-14,000 -1	-190,700 -20			
Bridgeport Reservoir	21	374,830	212,965 57	-3,774 -1	-71,416 -19			
Eagle Mountain Reservoir	22	178,380	135,868 76	-1,777 -1	-10,420 -6			
Benbrook Lake	23	88,200	68,101 77	3,087 4	-14,473 -16			
Joe Pool Lake	24	175,800	157,058 89	-420 0	-18,742 -11			
Ray Roberts Lake	25	798,760	584,052 73	-11,715 -1	-137,954 -17			
Lewisville Lake	26	555,000	324,529 58	-676 0	-133,538 -24			
Grapevine Lake	27	187,700	129,318 69	-1,413 -1	-26,781 -14			
Lavon Lake	28	443,800	298,931 67	-4,833 -1	-144,869 -33			
Lake Ray Hubbard	29	413,420	413,420 100	0 0	0 0			
Richland-Chambers Creek Lake	30	1,103,820	945,121 86	-8,773 -1	-158,699 -14			
Navarro Mills Lake	31	55,810	39,017 70	-1,401 -3	-16,793 -30			
Bardwell Lake	32	53,580	37,488 70	-144 0	-16,092 -30			
Hubbard Creek Reservoir	33	317,800	198,900 63	-5,500 -2	-53,200 -17			
Lake Graham	34	45,000	38,800 86	-980 -2	-450 -1			
Possum Kingdom Lake	35	551,820	424,300 77	-2,600 0	179,944 33			
Lake Palo Pinto	36	42,200	29,072 69	-819 -2	3,405 8			
Lake Granbury	37	135,680	117,800 87	-2,900 -2	-11,155 -8			
Lake Pat Cleburne	38	25,300	16,356 65	-352 -1	-8,944 -35			
Whitney Lake	39	622,800	427,600 69	0 0	-31,419 -5			
Waco Lake	40	144,500	106,438 74	-1,896 -1	-38,062 -26			
Proctor Lake	41	55,590	20,587 37	-515 -1	-13,046 -23			
Belton Lake	42	434,500	372,251 86	-3,924 -1	-62,249 -14			
Stillhouse Hollow Lake	43	226,060	212,668 94	61 0	-13,392 -6			
Lake Georgetown	44	37,010	25,258 68	-775 -2	-11,752 -32			
Granger Lake	45	54,280	50,928 94	1,323 2	-3,352 -6			
Lake Limestone	46	215,750	174,200 81	400 0	-41,550 -19			
Lake Brownwood	47	143,400	83,030 58	-1,490 -1	-28,975 -20			
TOTAL		11,922,600	9,176,423 77	-128,365 -1	-1,194,256 -10			

## CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage		Change since Late December 1999		Change since Late January 1999	
			Late January 2000 (acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)	(%)
<b>EAST</b>								
Wright Patman Lake	48	142,700	142,700	100	0	0	0	0
Lake Cypress Springs	49	66,800	62,700	94	660	1	-4,100	-6
Lake Bob Sandlin	50	202,300	182,300	90	-1,600	-1	-19,752	-10
Lake O' the Pines	51	252,000	231,915	92	977	0	-20,085	-8
Lake Fork Reservoir	52	635,200	582,300	92	-8,800	-1	-52,900	-8
Toledo Bend Reservoir	53	4,472,900	3,475,000	78	-15,000	0	-997,900	-22
Lake Palestine	54	411,300	354,300	86	2,100	1	-57,000	-14
Lake Tyler	55	73,700	71,795	97	-133	0	-1,905	-3
Sam Rayburn Reservoir	56	2,876,300	1,876,000	65	-65,000	-2	-1,000,300	-35
B. A. Steinhagen Lake	57	94,200	28,311	30	-43,336	-46	-27,099	-29
Cedar Creek Reservoir	58	637,050	551,625	87	-10,707	-2	-85,425	-13
Lake Livingston	59	1,750,000	1,750,000	100	0	0	0	0
Lake Conroe	60	429,900	375,000	87	-600	0	-47,300	-11
TOTAL		12,044,350	9,683,946	80	-141,439	-1	-2,302,225	-19
<b>TRANS-PECOS</b>								
Red Bluff Reservoir	61	307,000	87,900	29	1,160	0	17,680	6
TOTAL		307,000	87,900	29	1,160	0	17,680	6
<b>EDWARDS PLATEAU</b>								
E. V. Spence Reservoir	62	484,800	56,580	12	-1,810	0	-16,640	-3
Twin Buttes Reservoir	63	177,800	6,452	4	-39	0	-7,793	-4
O.C. Fisher Lake	64	119,200	7,765	7	-255	0	-4,911	-4
O. H. Ivie Reservoir	65	554,340	315,100	57	-7,900	-1	-107,600	-19
Lake Buchanan	66	896,980	606,678	68	-5,197	-1	-201,152	-22
Amistad Reservoir (Texas)	67	1,771,030	1,047,000	59	7,000	0	46,000	3
Amistad Reservoir (Texas and Mexico)	(67)	3,151,300	1,403,000	45	17,000	1	-15,000	0
TOTAL		4,004,150	2,039,575	51	-8,201	0	-292,096	-7
<b>SOUTH CENTRAL</b>								
Somerville Lake	68	155,060	141,760	91	1,794	1	-13,300	-9
Lake Travis	69	1,144,100	815,960	71	-9,871	-1	-328,140	-29
Canyon Lake	70	385,600	355,430	92	-1,343	0	-25,015	-6
Coletto Creek Reservoir	71	35,060	27,230	78	3,710	11	-7,830	-22
Medina Lake	72	254,000	197,700	78	-1,500	-1	-56,300	-22
TOTAL		1,973,820	1,538,080	78	-7,210	0	-430,585	-22
<b>UPPER COAST</b>								
Lake Houston	73	128,860	105,800	82	-600	0	-23,060	-18
Lake Texana	74	157,900	108,800	69	-4,400	-3	-49,100	-31
TOTAL		286,760	214,600	75	-5,000	-2	-72,160	-25

## CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

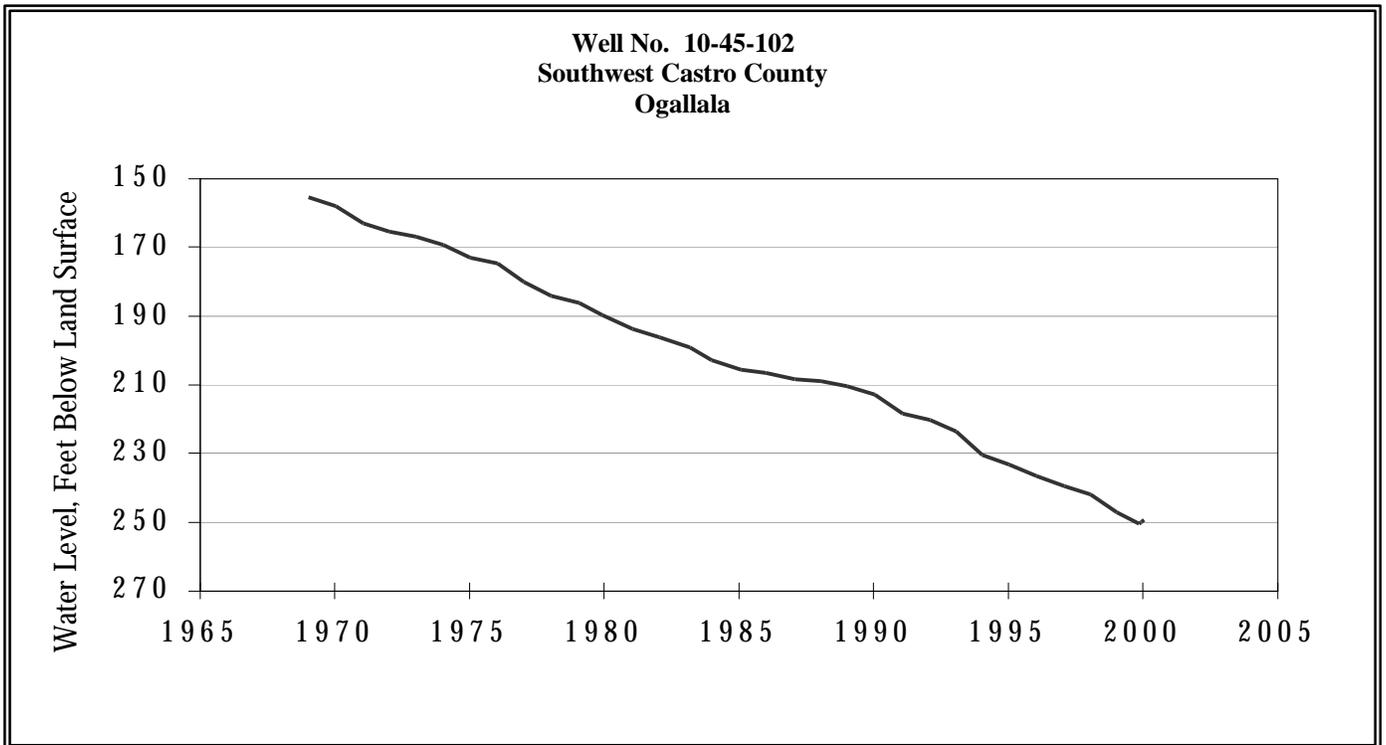
Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late January 2000 (acre-feet) (%)	Change since Late December 1999 (acre-feet) (%)	Change since Late January 1999 (acre-feet) (%)
<b>SOUTHERN</b>					
Choke Canyon Reservoir	75	695,260	293,000 42	-4,000 -1	-67,465 -10
Lake Corpus Christi	76	241,240	145,300 60	-4,400 -2	-39,399 -16
Falcon Reservoir (Texas)	77	1,555,120	308,000 20	-10,000 -1	-16,000 -1
Falcon Reservoir (Texas and Mexico)	(77)	2,653,290	612,000 23	-24,000 -1	3,000 0
TOTAL		2,491,620	746,300 30	-18,400 -1	-122,864 -5
 <b>STATE TOTAL</b>		 34,481,020	 24,174,486 70	 -324,400 -1	 -4,349,681 -13

**Note:**

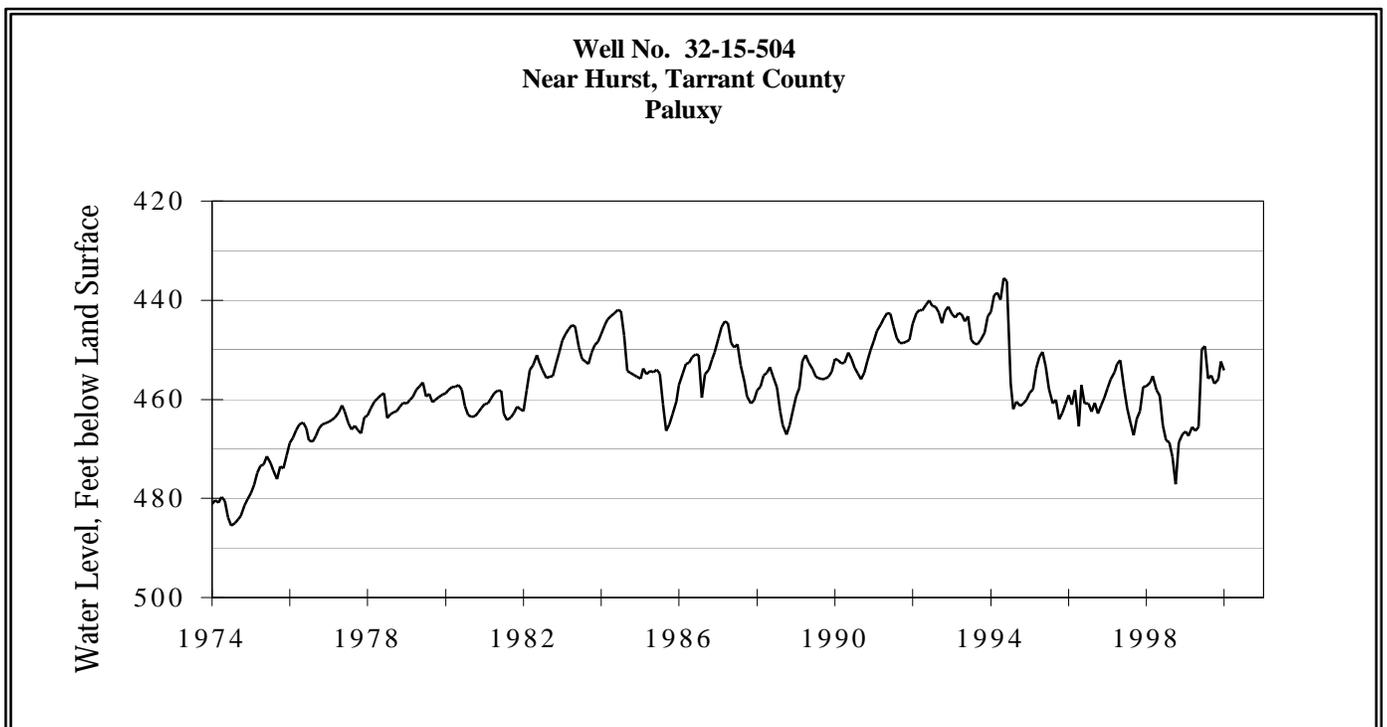
Conservation storage capacity is the space available to store water above the level of invert of lowest outlet works and below the level of top of conservation pool or normal maximum operating level. Conservation storage refers to the volume of water held within the conservation storage space. Not included is any water in flood control storage (above the top of conservation pool or normal maximum operating level), or any water in so called dead storage (in the bottom of the reservoir, below the invert of lowest outlet works and consequently not removable by gravity flow alone.) Percentage of conservation storage is based on the conservation storage capacity of the reservoir and the conservation storage in the reservoir for date shown. Percent change is given by % Change = 100 \* (current conservation storage - past conservation storage)/conservation storage capacity.

Current data are based on elevations near end of month at 77 reservoirs that together represent 98 percent of the total conservation storage capacity of major Texas reservoirs (those with capacity of 5,000 acre-feet or more each). Figures in parentheses for Lake Meredith represent the total conservation storage excluding 58,014 acre-feet of dead storage and are not included in State total. Preliminary figures are shown for the United States' share of conservation storage in International Amistad and International Falcon Reservoirs; the estimates may be subject to revision on completion of international water accounting. Texas (United States' share) and Mexico and are not included in State total.

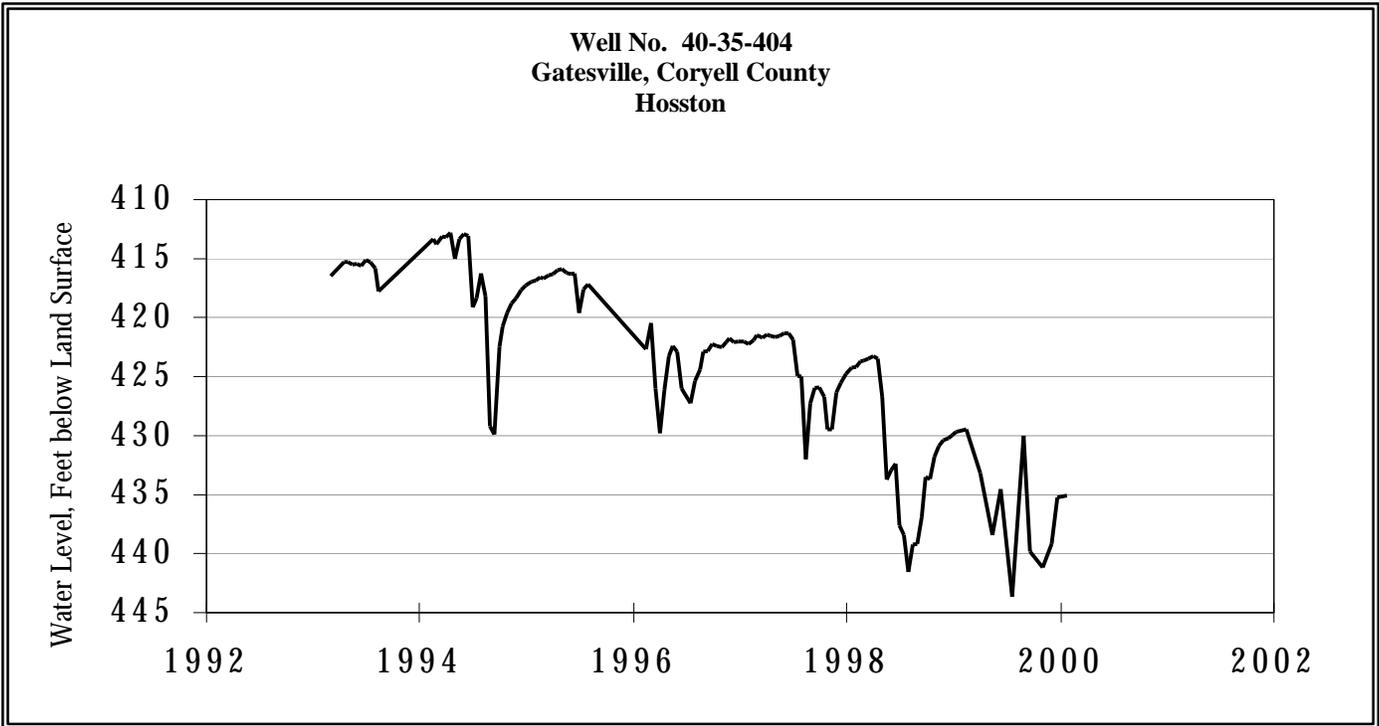
# JANUARY GROUND WATER LEVELS IN OBSERVATION WELLS



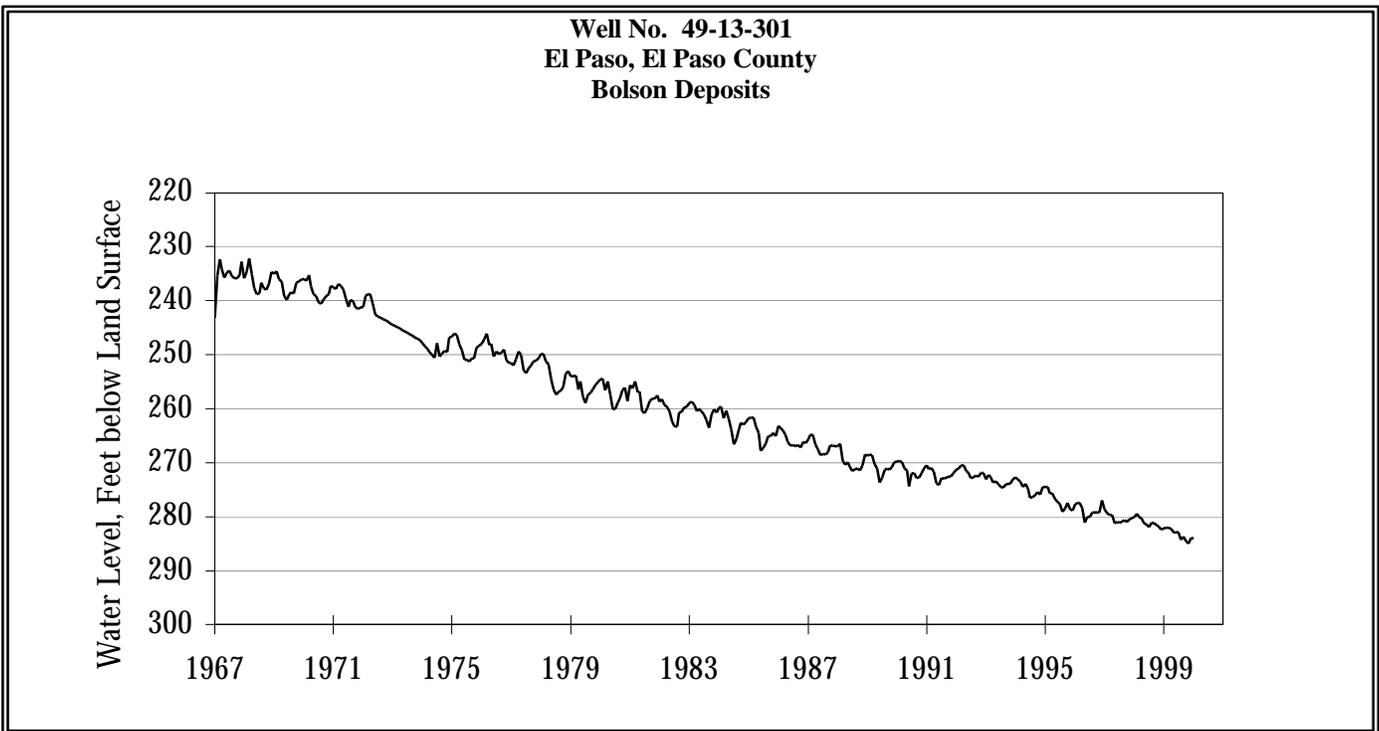
The January water-level measurements in this Ogallala well, elevation 3,816 feet above sea level, was 249.46 feet below land surface. This measurement was 0.29 feet above last month's measurement and 93.46 feet below the initial measurement recorded in 1968.



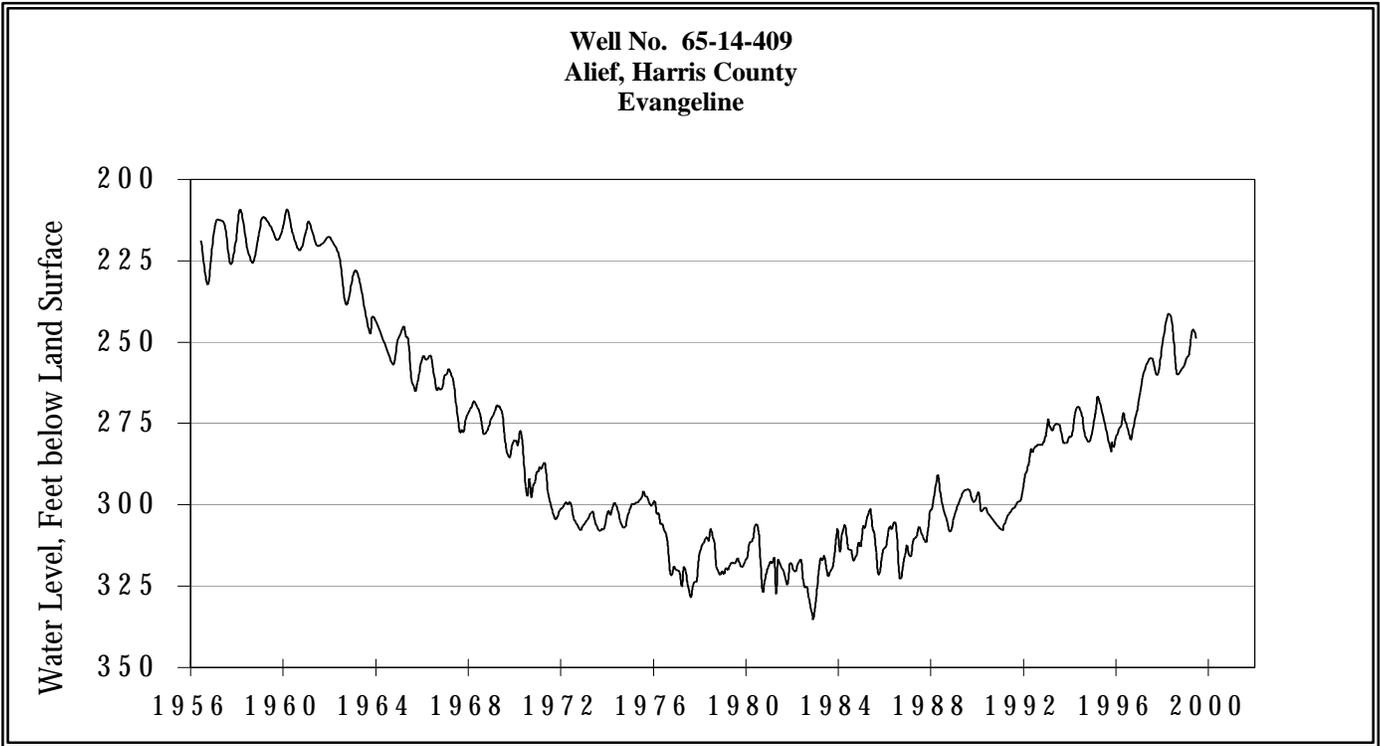
The January water-level measurement in this Paluxy aquifer well, elevation 535 feet above sea level, was 454.17 feet below land surface. This measurement was 1.75 feet below last month's measurement, 12.34 feet above last year's measurement, and 60.78 feet below the initial measurement recorded in 1953.



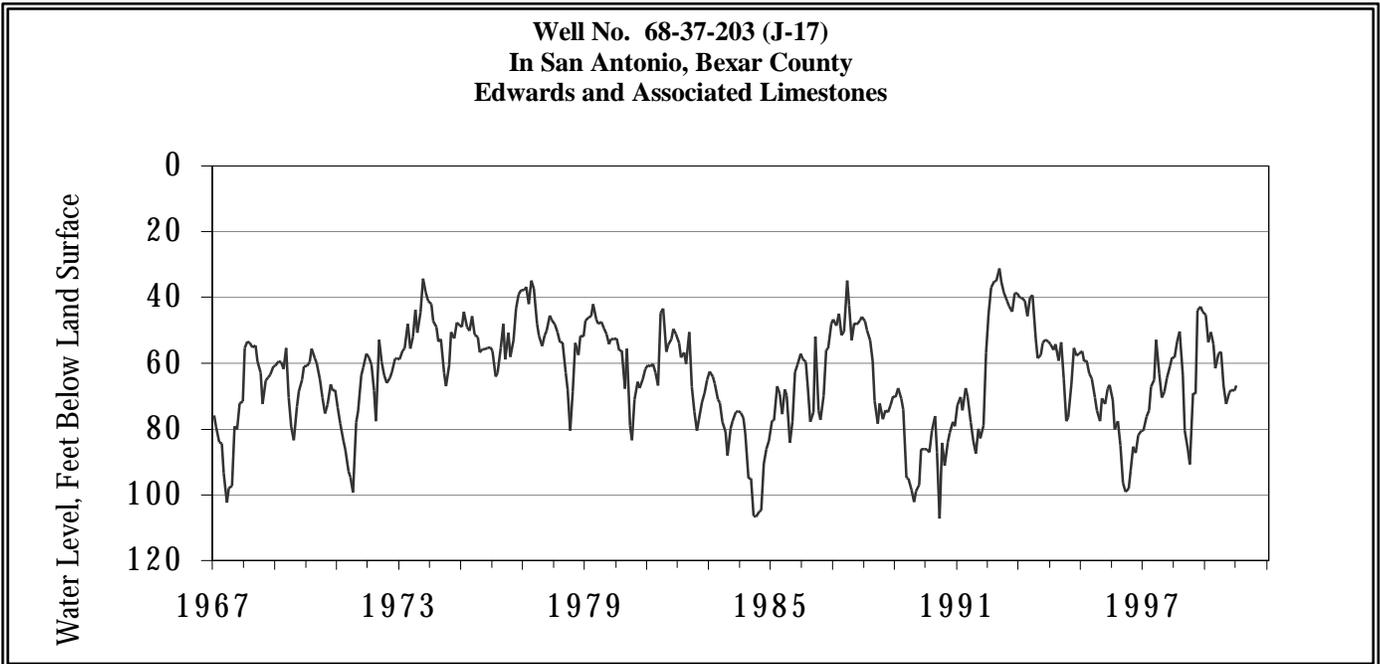
The January water-level measurement in this Hosston Formation aquifer well, elevation 823 feet above sea level, was 435.07 feet below land surface. This measurement was 0.14 feet above last month's measurement, 5.47 feet below last year's measurement, and 143.07 feet below the initial measurement recorded in 1955.



The January water-level measurement in this Bolson Deposits aquifer well, elevation 3,882 feet above sea level, was 284.07 feet below land surface. This was 0.12 of a foot below last month's measurement, 1.89 feet below last year's measurement, and 52.17 feet below the initial measurement recorded in 1964.

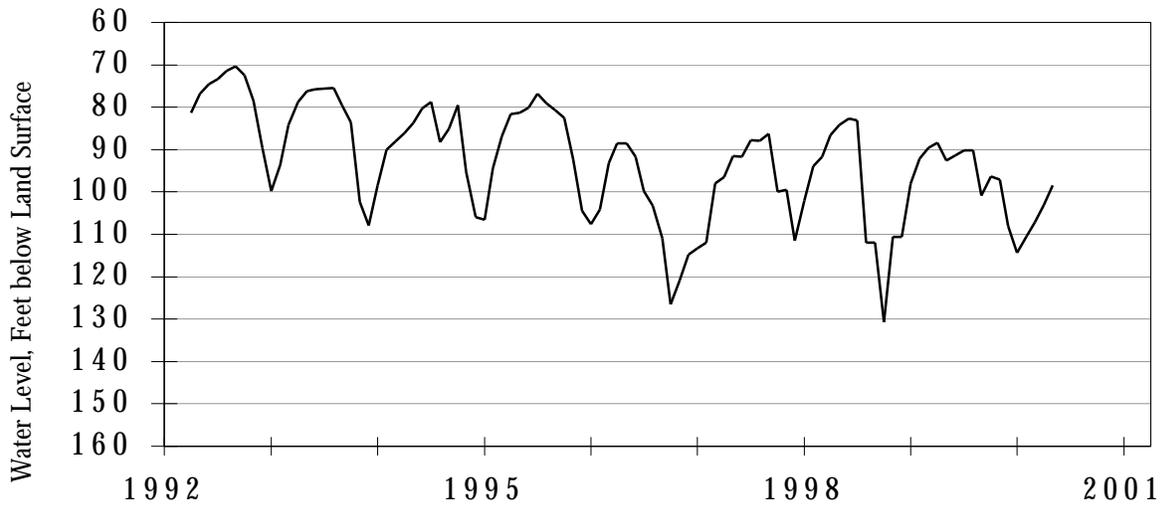


The January water-level measurement in this Evangeline aquifer well, elevation 66 feet above sea level, was 246.25 feet below land surface. This was 2.24 feet above last month's measurement, 8.49 feet above last year's measurement, and 143.02 feet below the initial measurement recorded in 1947.



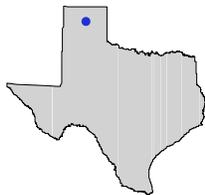
The January water-level measurement in this Edwards aquifer well, elevation 731 feet above sea level, was 66.88 feet below land surface. This was 1.43 feet above last month's measurement, 21.58 feet below last year's measurement, and 7.26 feet below the initial measurement recorded in 1962.

**Well No. 68-60-912  
Between Poteet and Pleasanton, Atascosa County  
Carrizo**



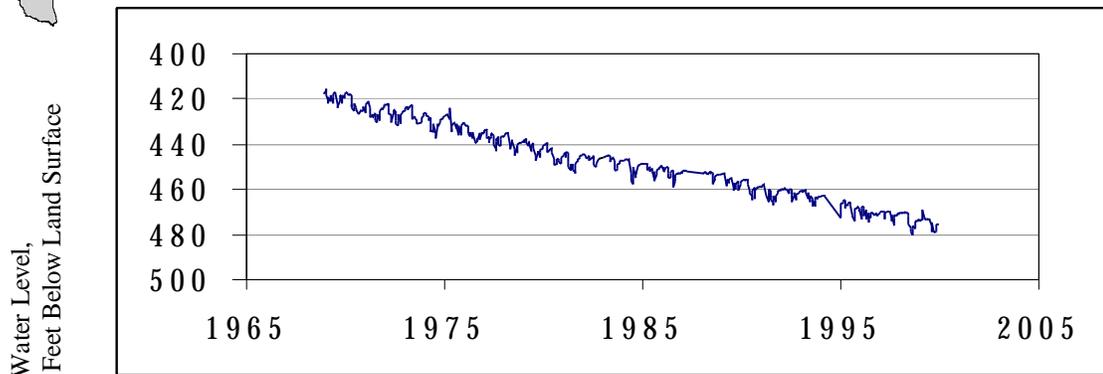
The January water-level measurement in this Carrizo aquifer well, elevation 446 feet above sea level, was 98.42 feet below land surface. This was 4.67 feet above last month's measurement, 9.99 feet below last year's measurement, and 17.17 feet below the initial measurement recorded in 1965.

***HYDROGRAPH OF THE MONTH***



Each month this space features a new hydrograph (marked with the • symbol on the map) depicting different aquifers and different conditions in Texas.

**Well No. 06-36-602  
Carson County**



This 767-foot-deep observation well, elevation 3,545 feet above sea level, is completed in the Ogallala formation, located northeast of the City of Amarillo, Texas. The graph illustrates a steady decline due to increased water demands from both farm irrigation and the City of Amarillo.